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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/789,511	02/27/2004	Rick Amori	FMC 1673 PUS1 / 81092486	7743
28395	7590	06/02/2006	EXAMINER	
BROOKS KUSHMAN P.C./FGTL 1000 TOWN CENTER 22ND FLOOR SOUTHFIELD, MI 48075-1238			SWENSON, BRIAN L	
			ART UNIT	PAPER NUMBER
			3618	

DATE MAILED: 06/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/789,511

Applicant(s)

AMORI ET AL.

Examiner

Brian Swenson

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 April 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) 2,4,14,15,17 and 20 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,3,6-9,11-13,16 and 18 is/are rejected.
- 7) ☒ Claim(s) 5,10 and 19 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 27 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- ☒ Notice of References Cited (PTO-892)
- ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 4/11/06, 2/27/04.
- ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- ☐ Notice of Informal Patent Application (PTO-152)
- ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

1. Claims 1, 3, 9, 16 and 18 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 6,378,637 issued to Ono et al. in view of U.S. Patent No. 6,220,380 issued to Mita et al.

Ono et al. teaches in Figures 1-7 and respective portions of the specification of a vehicle with: an energy producing and storage system including first (battery 7) and second portions (fuel tank 1); and a vehicle body (see Figures 2 and 3) including a floor having a first concavity formed therein for receiving a third portion (fuel cell 3 is located under a passenger seat; see Figure 2 where a cavity is formed for locating the fuel cell) of the system from outside the vehicle, the first concavity being configured to prevent at least some of the third portion from extending beyond the vehicle body, and to minimize use of vehicle occupant space.

Ono et al. does shows a battery (7) storage device located a longitudinal distance from a fuel tank (1).

Mita et al. teaches that it is known to locate a battery in a rear portion of the vehicle. It would have been obvious to one having ordinary skill in the art at the time of invention to reverse the location of the fuel reformer (2) and the battery pack (7) and to

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locate the battery in the rear portion of the vehicle, as taught by Mita et al., in the invention taught by Ono et al. Locating the battery in the position of the fuel reformer would provide a nesting configuration between the tank and the battery. One would be motivated to locate the battery in the rear portion of the vehicle to provide an even weight distribution along the length of the vehicle, an even weight distribution will be provided by having the fuel cell (3) in the current forward position and the battery in the rearward position of the vehicle. In the vehicle art fuel cells and batteries are known to be heavy components relative to other vehicular components. The functions of the fuel reformer will not be compromised by the forward relocation by well-known tubing conduits.

2. Claims 6-8 and 11-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ono et al. in view of Mita et al. and in further view of U.S. Patent No. 6,085,854 issued to Nishikawa.

Ono et al. as modified by Mita et al. disclose the claimed invention except for showing a second concavity to provide a conduit between the front and rear of the vehicle.

Nishikawa teaches of a frame structure for locating a battery. Nishikawa shows the frame is formed from longitudinal and transverse rails the provide concavities of differing heights (see for example Figure 4). See Figure 6, where Nishikawa teaches that the rails provide a conduit for cooling air. It would have been obvious to one having ordinary skill in the art at the time of invention to provide a frame structure, as taught by Nishikawa, for locating the fuel cell in the invention taught by Ono et al. and as modified by Mita et al. One would be motivated to use the frame structure, as taught by

Nishikawa, to allow cooling air to flow around the fuel cell, thereby providing cooling of the fuel cell.

Allowable Subject Matter

Claims 5, 10 and 19 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter: The primary reason for the indication of allowable subject matter in this case is the inclusion of nesting configuration between a battery and fuel tank, where the battery contains a concave portion and the fuel tank contains a corresponding convex portion, for a vehicle that additionally includes a fuel cell received in a concavity located in the floor of the vehicle, in combination with the other elements recited, not found in the prior art of record.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

U.S. Patent No. 5,704,644, U.S. Patent No. 5,501,289 issued to Nishikawa et al., U.S. Patent No. 6,227,322 issued to Nishikawa et al., U.S. Patent No. 4,216,839 issued to Gould et al., U.S. Patent No. 6,902,020 issued to Kronner et al., U.S. Patent No. 6,843,336 issued to Chernoff et al., U.S. Patent No. 4,365,681 issued to Singh and U.S. Patent No. 5,908,077 issued to Moore teach of a layout structures for locating a batteries

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Brian Swenson whose telephone number is (571) 272-6699. The examiner can normally be reached on M-F 9-5.

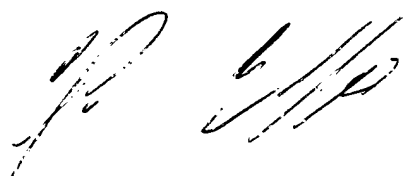
If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Ellis can be reached on (571) 272-6914. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Brian Swenson
Examiner
Art Unit 3618

BS 5/24/06

bls



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